



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,149	04/09/2001	Reidar Wascnius	004770.00794	6546

22907 7590 07/26/2006

BANNER & WITCOFF  
1001 G STREET N W  
SUITE 1100  
WASHINGTON, DC 20001

EXAMINER
----------

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
----------	--------------

2618

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/828,149	<b>Applicant(s)</b> WASENIUS, REIDAR	
	<b>Examiner</b> Raymond S. Dean	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19 - 50 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19 - 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed May 30, 2006 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with Applicant's assertion on Page 13 2<sup>nd</sup> Paragraph of the Remarks "There is no indication that the advertiser can perform additional function when in a group. Beck, as was detailed in the Office Action dated January 30, 2006, teaches an ad hoc network in which a communication group comprising mobile devices can be formed. Each of the mobile devices in the group can be both an advertiser and a user thus each said mobile device can access other needed services, such as printer services for example (Col. 5 lines 12 – 14), from other mobile devices via the ad hoc network. The additional services give added functionality such as a printing function. The only way for said devices to have access to said additional services is through the discovery feature that is used (Cols. 4 lines 63 – 67, 5 line 1). The only way that the discovery feature will occur is if an ad hoc network or group is formed thus the only way for said devices to access said additional services is through being a part of the group or ad hoc network..

Examiner respectfully disagrees with Applicant's assertion on Page 14, 1<sup>st</sup> Paragraph of the Remarks "Their functionality will not be altered ... Even upon acquiring a service, there is no indication in Beck .....", for the same reasons as set forth above.

Examiner disagrees with Applicant's assertion on Page 14 "First, there is no indication that the printing service is ...". The additional services, such as the printing service for example, will only be available to devices that desire said services by virtue of said devices being a part of the ad hoc network or group (See reasons set forth above for explanation as to why these services will only be available with the group). Each device will not have accessed each service thus the need for discovering other services.

Examiner respectfully disagrees with Applicant's assertion on Page 15, 1<sup>st</sup> Paragraph "Indeed, the Office Action does not point to any teaching ..." for the same reasons set forth above. Also, Applicant claims a "minimum number" of terminals, which is a broad limitation. Beck teaches an ad hoc network with any number of terminals and thus reads on the broad limitation "minimum number".

Examiner respectfully disagrees with Applicant's assertion on Page 15, 2<sup>nd</sup> Paragraph "The Applicants 1) respect disagree that the alleged ...". Beck in view of Haartsen teaches the claimed "groups". Lunsford is cited for its teaching of users of the plurality of wireless terminals deciding to form a group. Beck in view of Haartsen, as set forth above and as detailed in the Office Action dated January 30, 2006, teaches sharing the at least one function which is not common to each of the wireless terminals so that a total number of functions available to be performed by the individual wireless terminals of the group, in addition to performing the wireless communication with each other, is greater than a total number of functions available to be performed by the individual wireless terminals when the individual wireless terminals are not in the group.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 – 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al. (US 6,604,140) in view of Haartsen et al. (Proceedings of IEEE, Volume 88, Issue 10, Oct 2000, Pages 1651 – 1661) and if further view of Lunsford et al. (US 6,901,434).

Regarding Claim 19, Beck teaches a wireless communication system, comprising: a plurality of wireless terminals, the terminals being in wireless communication with each other including providing sharing of functions between the terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do

Art Unit: 2618

not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality), individual wireless terminals performing at least one function in addition to performing wireless communication with each other, which is common to the individual terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 61 – 63, the mobile devices can perform the function of advertising services and using services), and performing at least one function which is not common to individual wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, this means that said service advertisers possess additional functionalities that said service users do not possess); and the wireless terminals sharing the at least one function which is not common to each of the wireless terminals so that a total number of functions available to be performed by the individual wireless terminals, in addition to performing the wireless communication with each other, is greater than a total number of functions available to be performed by the individual wireless terminals when the individual wireless terminals are not in communication with one another (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said

service users will therefore have access to a greater number of services thus expanding their functionality); and wherein sharing of the at least one function which is not common to the wireless terminals may occur between the wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality).

Beck does not teach a plurality of wireless terminals formed into a predefined group in which users of the plurality of wireless terminals decide to form the group and after formation of the group the plurality of wireless terminals are recognized by an identification thereof as being members of the group and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification and upon confirmation by the wireless terminals that the wireless terminals have the recognized identification, a group session is initiated with the predefined group.

Haartsen teaches a plurality of wireless terminals into a predefined group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, the Bluetooth devices can move into the neighborhood of preexisting or predefined piconets thus a Bluetooth system has predefined groups) and after formation of the group, the plurality of wireless terminals are recognized by an identification thereof as being members of the group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, a piconet will not be formed unless

the identification of the terminals is determined thus after said piconet is formed said terminals will be recognized by said identification as being members of said piconet) and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, Section B (Piconets), 1<sup>st</sup> Paragraph lines 6 – 10, any of the slaves can become masters thereby enabling said slaves to determine if the other terminals in the predefined group has a recognized identification) and upon confirmation by the wireless terminals that the wireless terminals have the recognized identification, a group session is initiated with the predefined group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, when the wireless terminals have responded with the identification information said wireless units can be paged and a piconet can be formed thereby enabling a group session to be established).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the predefined group and group communication method taught by Haartsen in the ad hoc network of Beck as the ad hoc network of Beck uses a Bluetooth protocol and for the purpose of enabling each mobile device to autonomously identify other mobile devices so as to build up a flexible communication network as taught by Haartsen.

Beck in view of Haartsen does not teach a predefined group in which users of the plurality of wireless terminals decide to form the group.

Lunsford teaches users of the plurality of wireless terminals deciding to form a group (Column 2 lines 45 – 59, Column 3 lines 17 – 49).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

Regarding Claim 20, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches wherein the wireless communication is by a low power radio frequency link (Column 3 lines 52 – 53, a Bluetooth network comprises low power radio frequency links).

Regarding Claim 21, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches wherein one of the at least one additional function of the group of wireless terminals is a software application (Column 5 lines 38 – 64, the additional services are software applications).

Regarding Claim 22, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Haartsen further teaches wherein the group includes a minimum of two and a maximum of seven terminals (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, a typical piconet can include a minimum of two and a maximum of seven terminals).

Regarding Claim 23, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Haartsen further teaches wherein the group is established by one wireless terminal of the plurality of wireless

Art Unit: 2618

terminals becoming a master, which scans by wireless communication to locate other of the plurality of wireless terminals to join the group as slaves (Page 1655, Section B (Piconets) 1<sup>st</sup> Paragraph lines 1 – 8).

Regarding Claim 24, Beck teaches a wireless communication system, comprising: a plurality of wireless terminals, the terminals being in wireless communication with each other including providing sharing of functions between the terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality), individual wireless terminals performing at least one function in addition to performing wireless communication with each other, which is common to the individual terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 61 – 63, the mobile devices can perform the function of advertising services and using services), and performing at least one function which is not common to individual wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, this means that said service advertisers possess additional functionalities that said service users do not possess);

Art Unit: 2618

and the wireless terminals sharing the at least one function which is not common to each of the wireless terminals so that a total number of functions available to be performed by the individual wireless terminals, in addition to performing the wireless communication with each other, is greater than a total number of functions available to be performed by the individual wireless terminals when the individual wireless terminals are not in communication with one another (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality); and wherein sharing of the at least one function which is not common to the wireless terminals may occur between the wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality).

Beck does not teach a plurality of wireless terminals formed into a predefined group in which users of the plurality of wireless terminals decide to form the group wherein the group is established by one wireless terminal of the plurality of wireless terminals becoming a master, which scans by wireless communication to locate other of the plurality of wireless terminals to join the group as slaves and after formation of the

group the plurality of wireless terminals are recognized by an identification thereof as being members of the group, wherein at least one wireless terminal of the group may be removed by a remainder of wireless terminals of the group, and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification and upon confirmation by the wireless terminals that the wireless terminals have the recognized identification, a group session is initiated with the predefined group.

Haartsen teaches a plurality of wireless terminals into a predefined group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, the Bluetooth devices can move into the neighborhood of preexisting or predefined piconets thus a Bluetooth system has predefined groups) wherein the group is established by one wireless terminal of the plurality of wireless terminals becoming a master, which scans by wireless communication to locate other of the plurality of wireless terminals to join the group as slaves (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8) and after formation of the group, the plurality of wireless terminals are recognized by an identification thereof as being members of the group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, a piconet will not be formed unless the identification of the terminals is determined thus after said piconet is formed said terminals will be recognized by said identification as being members of said piconet) wherein at least one wireless terminal of the group may be removed by a remainder of wireless terminals of the group (Page 1654, Section III (AD HOC CONNECTIVITY), in a typical Bluetooth system, members of an established piconet can deny a new member's request to join

said piconet, the new member is blocked or removed from the established piconet by the members of said piconet), and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, Section B (Piconets), 1<sup>st</sup> Paragraph lines 6 – 10, any of the slaves can become masters thereby enabling said slaves to determine if the other terminals in the predefined group has a recognized identification) and upon confirmation by the wireless terminals that the wireless terminals have the recognized identification, a group session is initiated with the predefined group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, when the wireless terminals have responded with the identification information said wireless units can be paged and a piconet can be formed thereby enabling a group session to be established).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the predefined group and group communication method taught by Haartsen in the ad hoc network of Beck as the ad hoc network of Beck uses a Bluetooth protocol and for the purpose of enabling each mobile device to autonomously identify other mobile devices so as to build up a flexible communication network as taught by Haartsen.

Beck in view of Haartsen does not teach a predefined group in which users of the plurality of wireless terminals decide to form the group.

Lunsford teaches users of the plurality of wireless terminals deciding to form a group (Column 2 lines 45 – 59, Column 3 lines 17 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

Regarding Claim 25, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches wherein at least one additional function becomes available only when there is a minimum number of the plurality of wireless terminals (Column 4 lines 6 – 9, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality, the number of mobile devices can be any number thus there can be a minimum number of said mobile devices).

Regarding Claim 26, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches wherein at least one additional function becomes available and is available for a single terminal of the group after having been a member of the group (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc

network, said service users will therefore have access to a greater number of services after having communicated with said service advertisers thus expanding their functionality).

Regarding Claim 27, Beck teaches in a wireless communication system including a plurality of wireless terminals in wireless communication with each other including providing sharing of functions between the wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality), at least one function, in addition to performing the wireless communication with other wireless terminals, wherein the at least one function is commonly performed by individual wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 61 – 63, the mobile devices can perform the function of advertising services and using services); and at least one additional function, which is not common to the individual wireless terminals and is shared while individual wireless terminals are in communication with one another so that the individual wireless terminals have availability to perform a greater number of functions, in addition to performing wireless communication, than the individual wireless terminals have while not in communication with one another (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 –

Art Unit: 2618

60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality); and wherein sharing of the at least one function which is not common to the wireless terminals may occur between the wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality).

Beck does not teach a predefined group of wireless terminals in which users of the plurality of wireless terminals decide to form the group and after formation of the group the plurality of wireless terminals are recognized by an identification thereof as being members of the group, a wireless terminal comprising: a transmitter; a receiver; a communication device for handling transmitted and received wireless messages respectively transmitted by the transmitter and received by the receiver, and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system and upon confirmation received by the wireless communication system from the wireless terminals that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group.



Haartsen teaches a predefined group of wireless terminals (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, the Bluetooth devices can move into the neighborhood of preexisting or predefined piconets thus a Bluetooth system has predefined groups), and after formation of the group, the plurality of wireless terminals are recognized by an identification thereof as being members of the group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, a piconet will not be formed unless the identification of the terminals is determined thus after said piconet is formed said terminals will be recognized by said identification as being members of said piconet), a wireless terminal comprising: a transmitter; a receiver; a communication device for handling transmitted and received wireless messages respectively transmitted by the transmitter and received by the receiver (Section II (Bluetooth Air Interface), 4<sup>th</sup> Bullet), and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, Section B (Piconets), 1<sup>st</sup> Paragraph lines 6 – 10, any of the slaves can become masters thereby enabling said slaves to determine if the other terminals in the predefined group has a recognized identification) and upon confirmation received by the wireless communication system from the wireless terminals that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, when the wireless terminals have responded with the identification information said

wireless units can be paged and a piconet can be formed thereby enabling a group session to be established).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the predefined group, wireless terminal, and group communication method taught by Haartsen in the ad hoc network of Beck as the ad hoc network of Beck uses a Bluetooth protocol and for the purposes of enabling each mobile device to autonomously identify other mobile devices so as to build up a flexible communication network and enabling the mobile devices to communicate bi-directionally as taught by Haartsen.

Beck in view of Haartsen does not teach a predefined group in which users of the plurality of wireless terminals decide to form the group.

Lunsford teaches users of the plurality of wireless terminals deciding to form a group (Column 2 lines 45 – 59, Column 3 lines 17 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

Regarding Claim 28, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 27. Beck further teaches wherein at least one function is a software application (Column 5 lines 38 – 64, the additional services are software applications).

Regarding Claim 29, Beck teaches a plurality of wireless terminals which wirelessly communicate with each other including providing sharing of functions between the wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality); individual wireless terminals performing at least one function while in communication with one another, in addition to performing wireless communication, wherein the at least one function is common to all wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 61 – 63, the mobile devices can perform the function of advertising services and using services); and at least one of the individual wireless terminals performing at least one additional function, which is not a function common to the individual wireless terminals and is shared with the individual wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, this means that said service advertisers possess additional functionalities that said service users do not possess, said service users will therefore have access to a greater number of services thus expanding their functionality); and wherein sharing of the at least one

Art Unit: 2618

function which is not common to the wireless terminals may occur between the wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality).

Beck does not teach a plurality of wireless terminals forming a predefined group in which users of the plurality of wireless terminals decide to form the group and after formation of the group the plurality of wireless terminals are recognized by an identification thereof as being members of the group, one of the wireless terminals of the group being a master terminal which controls interactions between the plurality of wireless terminals of the group, and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system and upon confirmation that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group.

Haartsen teaches a plurality of wireless terminals forming a predefined group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, the Bluetooth devices can move into the neighborhood of preexisting or predefined piconets thus a Bluetooth system has predefined groups) and after formation of the group, the plurality of wireless terminals are recognized by an identification thereof as being members of the group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, a piconet will not be

Art Unit: 2618

formed unless the identification of the terminals is determined thus after said piconet is formed said terminals will be recognized by said identification as being members of said piconet), one of the wireless terminals of the group being a master terminal which controls interactions between the plurality of wireless terminals of the group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8), and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, Section B (Piconets), 1<sup>st</sup> Paragraph lines 6 – 10, any of the slaves can become masters thereby enabling said slaves to determine if the other terminals in the predefined group has a recognized identification) and upon confirmation that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, when the wireless terminals have responded with the identification information said wireless units can be paged and a piconet can be formed thereby enabling a group session to be established).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the predefined group and group communication method taught by Haartsen in the ad hoc network of Beck as the ad hoc network of Beck uses a Bluetooth protocol and for the purpose of enabling each mobile device to autonomously identify other mobile devices so as to build up a flexible communication network as taught by Haartsen.

Beck in view of Haartsen does not teach a predefined group in which users of the plurality of wireless terminals decide to form the group.

Lunsford teaches users of the plurality of wireless terminals deciding to form a group (Column 2 lines 45 – 59, Column 3 lines 17 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

Regarding Claim 30, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Beck further teaches wherein the wireless communication link is a low power radio frequency (Column 3 lines 52 – 53, a Bluetooth network comprises low power radio frequency links).

Regarding Claim 31, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 30. Beck further teaches wherein the additional function is a software application (Column 5 lines 38 – 64, the additional services are software applications).

Regarding Claim 32, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Haartsen further teaches wherein the group includes a minimum of two and a maximum of seven wireless terminals (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, a typical piconet can include a minimum of two and a maximum of seven terminals).

Regarding Claim 33, Beck teaches a plurality of wireless terminals which wirelessly communicate with each other including providing sharing of functions between the wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality); individual wireless terminals performing at least one function while in communication with one another, in addition to performing wireless communication, wherein the at least one function is common to all wireless terminals (Figure 1, Column 3 lines 41 – 43, Column 3 lines 52 – 53, Column 4 lines 6 – 13, Column 4 lines 61 – 63, the mobile devices can perform the function of advertising services and using services); and at least one of the individual wireless terminals performing at least one additional function, which is not a function common to the individual wireless terminals and is shared with the individual wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, this means that said service advertisers possess additional functionalities that said service users do not possess, said service users will therefore have access to a greater number of services thus expanding their functionality); and wherein sharing of the at least one

function which is not common to the wireless terminals may occur between the wireless terminals (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services thus expanding their functionality).

Beck does not teach a plurality of wireless terminals forming a predefined group in which users of the plurality of wireless terminals decide to form the group, wherein at least one wireless terminal in the group may be removed from the group by a remainder of the wireless terminals in the group, and after formation of the group the plurality of wireless terminals are recognized by an identification thereof as being members of the group, one of the wireless terminals of the group being a master terminal which controls interactions between the plurality of wireless terminals of the group, and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system and upon confirmation that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group.

Haartsen teaches a plurality of wireless terminals forming a predefined group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8, the Bluetooth devices can move into the neighborhood of preexisting or predefined piconets thus a Bluetooth system has predefined groups), wherein at least one wireless terminal in the group may be removed from the group by a remainder of the wireless terminals in the group (Page



Art Unit: 2618

1654, Section III (AD HOC CONNECTIVITY), in a typical Bluetooth system, members of an established piconet can deny a new member's request to join said piconet, the new member is blocked or removed from the established piconet by the members of said piconet), and after formation of the group, the plurality of wireless terminals are recognized by an identification thereof as being members of the group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, a piconet will not be formed unless the identification of the terminals is determined thus after said piconet is formed said terminals will be recognized by said identification as being members of said piconet), one of the wireless terminals of the group being a master terminal which controls interactions between the plurality of wireless terminals of the group (Page 1655, Section B (Piconets), 1<sup>st</sup> Paragraph lines 1 – 8), and the wireless terminals determine if each of the wireless terminals belonging to the predefined group has a recognized identification in the wireless communication system (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, Section B (Piconets), 1<sup>st</sup> Paragraph lines 6 – 10, any of the slaves can become masters thereby enabling said slaves to determine if the other terminals in the predefined group has a recognized identification) and upon confirmation that the wireless terminals have the recognized identification, the wireless communication system initiates a group session with the predefined group (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, when the wireless terminals have responded with the identification information said wireless units can be paged and a piconet can be formed thereby enabling a group session to be established).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the predefined group and group communication method taught by Haartsen in the ad hoc network of Beck as the ad hoc network of Beck uses a Bluetooth protocol and for the purpose of enabling each mobile device to autonomously identify other mobile devices so as to build up a flexible communication network as taught by Haartsen.

Beck in view of Haartsen does not teach a predefined group in which users of the plurality of wireless terminals decide to form the group.

Lunsford teaches users of the plurality of wireless terminals deciding to form a group (Column 2 lines 45 – 59, Column 3 lines 17 – 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Beck in view of Haartsen with the decision method of Lunsford for the purpose of enabling the users of handheld Bluetooth terminals to request and retrieve desired information that other users of other handheld Bluetooth terminals possess as taught by Lunsford.

Regarding Claim 34, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Beck further teaches wherein at least one additional function becomes available only when there is a minimum number of terminals (Column 4 lines 6 – 9, Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 64, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said

service users will therefore have access to a greater number of services thus expanding their functionality, the number of mobile devices can be any number thus there can be a minimum number of said mobile devices).

Regarding Claim 35, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Beck further teaches wherein at least one additional function becomes available and is available for a single terminal of the group after having been a member of the group (Column 4 lines 63 – 67, Column 5 lines 1 – 22, Column 5 lines 38 – 60, the mobile devices (service users) can access other needed services, that said service users do not possess, by communicating with other mobile devices (service advertisers) that have said services via an ad hoc network, said service users will therefore have access to a greater number of services after having communicated with said service advertisers thus expanding their functionality).

Regarding Claim 36, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Haartsen further teaches information is exchanged in the group which is used by the group to determine if an individual wireless terminal belongs in the group of wireless terminals (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, the mobile terminals must respond to the inquiry message with a Frequency Hop Synchronization (FHS) packet which includes the Bluetooth Address (BD\_ADDR) and a clock, if said mobile terminals do not respond to the inquiry message with said FHS packet said mobile terminals do not belong to the group).

Regarding Claim 37, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Haartsen further teaches wherein the group has rules, which control use of information by the group (Page 1655, Section A (Establishing Connections), 3rd Paragraph, the paging procedure has rules that the paging unit and recipient must follow in order to establish a piconet so that information can be exchanged).

Regarding Claim 38, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 27. Haartsen further teaches information is exchanged in the group which is used by the group to determine if an individual wireless terminal belongs in the group of wireless terminals (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, the mobile terminals must respond to the inquiry message with a Frequency Hop Synchronization (FHS) packet which includes the Bluetooth Address (BD\_ADDR) and a clock, if said mobile terminals do not respond to the inquiry message with said FHS packet said mobile terminals do not belong to the group).

Regarding Claim 39, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 27. Haartsen further teaches wherein the group has rules, which control use of information by the group (Page 1655, Section A (Establishing Connections), 3rd Paragraph, the paging procedure has rules that the paging unit and recipient must follow in order to establish a piconet so that information can be exchanged).

Regarding Claim 40, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Haartsen further teaches information is exchanged in the group which is used by the group to determine if an individual wireless terminal belongs in the group of wireless terminals (Page 1655, Section A (Establishing Connections), 4<sup>th</sup> Paragraph, the mobile terminals must respond to the inquiry message with a Frequency Hop Synchronization (FHS) packet which includes the Bluetooth Address (BD\_ADDR) and a clock, if said mobile terminals do not respond to the inquiry message with said FHS packet said mobile terminals do not belong to the group).

Regarding Claim 41, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Haartsen further teaches wherein the group has rules, which control use of information by the group (Page 1655, Section A (Establishing Connections), 3<sup>rd</sup> Paragraph, the paging procedure has rules that the paging unit and recipient must follow in order to establish a piconet so that information can be exchanged).

Regarding Claim 42, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches the wireless terminals use the at least one common function and the at least one function which is not common to interact to perform a common application (Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software, which performs the function of using services, will interact with or use the new service, which is an uncommon function, the use of said new service is the common application).

Regarding Claim 43, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 27. Beck further teaches the wireless terminals use the at least one common function and the at least one function which is not common to interact to perform a common application (Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software, which performs the function of using services, will interact with or use the new service, which is an uncommon function, the use of said new service is the common application).

Regarding Claim 44, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Beck further teaches the wireless terminals use the at least one common function and the at least one function which is not common to interact to perform a common application (Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software, which performs the function of using services, will interact with or use the new service, which is an uncommon function, the use of said new service is the common application).

Regarding Claim 45, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 19. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

Regarding Claim 46, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 27. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

Regarding Claim 47, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 29. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

Regarding Claim 48, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 42. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other

mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

Regarding Claim 49, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 43. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

Regarding Claim 50, Beck in view of Haartsen and in further view of Lunsford teaches all of the claimed limitations recited in Claim 44. Beck further teaches the at least one common function and the at least one function which is not common are a set of functions which are shared while in the group (Column 4 lines 61 – 63, Column 5 lines 38 – 67, Column 6 lines 1 – 2, Column 6 lines 29 – 40, the client software of the requesting mobile devices (service users) will interact with the new services of other mobile devices (service advertisers) thus said client software and said new services will be shared amongst said mobile devices).

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean

July 20, 2006



EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600